

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-165. (Canceled)

166. (Currently amended) A method according to claim 181 ~~164~~, wherein applying the current comprises identifying that the subject is suffering from atrial fibrillation (AF) and from increased risk of thromboembolic events, and applying the current responsively to the identifying.

167. (Canceled)

168. (Currently amended) A method according to claim 181 ~~164~~, wherein applying the current comprises detecting an occurrence of atrial fibrillation (AF), and applying the current responsively to the detecting.

169-175. (Canceled)

176. (Currently amended) A method according to claim 188 ~~175~~, wherein modulating ~~configuring~~ the current comprises setting each of the first stimulation periods to have a duration of between about 100 milliseconds and about 1000 milliseconds.

177. (Currently amended) A method according to claim 188 ~~175~~, wherein modulating ~~configuring~~ the current comprises setting each of the second stimulation periods to have a duration of between about 200 milliseconds and about 15 seconds.

178. (Currently amended) A method according to claim 188 ~~175~~, wherein modulating ~~configuring~~ the current comprises configuring the current to have a first frequency during the first stimulation periods, and a second frequency during the second stimulation periods, the first frequency greater than the second frequency.

179. (Currently amended) A method according to claim 188 ~~175~~, wherein modulating ~~configuring~~ the current comprises configuring the current to have a first amplitude during the first stimulation periods, and a second amplitude during the second stimulation periods, the first amplitude greater than the second amplitude.
180. (Currently amended) A method according to claim 188 ~~175~~, wherein applying the current comprises:
 applying the current during the first stimulation periods; and
 withholding applying the current during the second stimulation periods.
181. (Currently amended) ~~A method according to claim 175, wherein configuring the current comprises:~~ A treatment method, comprising:
 applying an electrical current to a vagus nerve of a subject; and
 modulating the current to cause fluctuation in atrial contractility sufficiently to reduce a risk of an occurrence of a thromboembolic event,
 wherein modulating the current to cause the fluctuation in the atrial contractility comprises cycling between first and second stimulation periods, and:
 during the first stimulation periods, configuring the current to cause a reduction in a force of contraction of atrial cells of the subject, and configuring the current so as to induce action potentials in the vagus nerve; and
 during the second stimulation periods, configuring the current to cause an increase in the reduced force of contraction of the atrial cells, and configuring the current so as to block action potentials in the vagus nerve.
182. (Canceled)
183. (Currently amended) A method according to claim 188 ~~175~~,

wherein applying the current comprises applying the current in respective bursts in each of a plurality of cardiac cycles of the subject, and

wherein modulating ~~configuring~~ the current comprises configuring each pulse of each of the bursts to have a pulse width of at least a first pulse width during the first stimulation periods, and to have a pulse width of less than a second pulse width during the second stimulation periods, the first pulse width being greater than or equal to the second pulse width.

184. (Currently amended) A method according to claim 188 ~~175~~,

wherein applying the current comprises applying the current in respective bursts in each of a plurality of cardiac cycles of the subject, and

wherein modulating ~~configuring~~ the current comprises configuring each of the bursts to have a number of pulses of at least a first number of pulses during the first stimulation periods, and to have a number of pulses of less than a second number of pulses during the second stimulation periods, the first number of pulses being greater than or equal to the second number of pulses.

185. (Currently amended) A method according to claim 181 ~~175~~, wherein modulating ~~configuring~~ the current comprises sensing at least one physiological variable of the subject, and synchronizing a commencement of at least one of the first and second stimulation periods with the sensed physiological variable.

186. (Currently amended) ~~A method according to claim 185,~~ A treatment method, comprising:

applying an electrical current to a vagus nerve of a subject; and

modulating the current to cause fluctuation in atrial contractility sufficiently to reduce a risk of an occurrence of a thromboembolic event,

wherein modulating the current to cause the fluctuation in the atrial contractility comprises cycling between first and second stimulation periods, and:

during the first stimulation periods, configuring the current to cause a reduction in a force of contraction of atrial cells of the subject; and

during the second stimulation periods, configuring the current to cause an increase in the reduced force of contraction of the atrial cells,

wherein modulating the current comprises sensing at least one physiological variable of the subject, and synchronizing a commencement of at least one of the first and second stimulation periods with the sensed physiological variable,

wherein the sensed physiological variable includes a QRS-complex of the subject, and wherein ~~modulating~~ ~~configuring~~ the current comprises initiating each of the first stimulations period within about 50 milliseconds after an occurrence of the QRS-complex.

187. (Currently amended) ~~A method according to claim 185, A~~
treatment method, comprising:

applying an electrical current to a vagus nerve of a subject; and

modulating the current to cause fluctuation in atrial contractility sufficiently to reduce a risk of an occurrence of a thromboembolic event,

wherein modulating the current to cause the fluctuation in the atrial contractility comprises cycling between first and second stimulation periods, and:

during the first stimulation periods, configuring the current to cause a reduction in a force of contraction of atrial cells of the subject; and

during the second stimulation periods, configuring the current to cause an increase in the reduced force of contraction of the atrial cells,

wherein modulating the current comprises sensing at least one physiological variable of the subject, and synchronizing a commencement of at least one of the first and second stimulation periods with the sensed physiological variable,

wherein the sensed physiological variable includes an expiration by the subject, and wherein modulating configuring the current comprises initiating each of the first stimulation periods within about 500 milliseconds after a beginning of the expiration.

188. (Currently amended) ~~A method according to claim 185,~~ A treatment method, comprising:

applying an electrical current to a vagus nerve of a subject; and

modulating the current to cause fluctuation in atrial contractility sufficiently to reduce a risk of an occurrence of a thromboembolic event,

wherein modulating the current to cause the fluctuation in the atrial contractility comprises cycling between first and second stimulation periods, and:

during the first stimulation periods, configuring the current to cause a reduction in a force of contraction of atrial cells of the subject; and

during the second stimulation periods, configuring the current to cause an increase in the reduced force of contraction of the atrial cells,

wherein modulating the current comprises sensing at least one physiological variable of the subject, and synchronizing a commencement of at least one of the first and second stimulation periods with the sensed physiological variable,

wherein the sensed physiological variable includes diastole of the subject, and wherein modulating configuring the current comprises initiating each of the second stimulation periods substantially simultaneously with a portion of the diastole.

189-361. (Canceled)

362. (Currently amended) A method according to claim 181 ~~164~~, wherein applying the current comprises identifying that the subject is suffering from atrial fibrillation (AF), and applying the current responsively to the identifying.

363-364. (Canceled)

365. (New) A method according to claim 186, wherein applying the current comprises identifying that the subject is suffering from atrial fibrillation (AF) and from increased risk of thromboembolic events, and applying the current responsively to the identifying.
366. (New) A method according to claim 187, wherein applying the current comprises identifying that the subject is suffering from atrial fibrillation (AF) and from increased risk of thromboembolic events, and applying the current responsively to the identifying.
367. (New) A method according to claim 188, wherein applying the current comprises identifying that the subject is suffering from atrial fibrillation (AF) and from increased risk of thromboembolic events, and applying the current responsively to the identifying.
368. (New) A method according to claim 186, wherein applying the current comprises detecting an occurrence of atrial fibrillation (AF), and applying the current responsively to the detecting.
369. (New) A method according to claim 187, wherein applying the current comprises detecting an occurrence of atrial fibrillation (AF), and applying the current responsively to the detecting.
370. (New) A method according to claim 188, wherein applying the current comprises detecting an occurrence of atrial fibrillation (AF), and applying the current responsively to the detecting.
371. (New) A method according to claim 186, wherein applying the current comprises identifying that the subject is suffering from atrial fibrillation (AF), and applying the current responsively to the identifying.

372. (New) A method according to claim 187, wherein applying the current comprises identifying that the subject is suffering from atrial fibrillation (AF), and applying the current responsively to the identifying.
373. (New) A method according to claim 188, wherein applying the current comprises identifying that the subject is suffering from atrial fibrillation (AF), and applying the current responsively to the identifying.